# Referee Report on "Does Tax-Benefit Linkage Matter for the Incidence of Payroll Taxes?"

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## Summary

In this paper, A.Bozio et al (Bozio et al. 2025) propose a potential explanation to reconcile the conflicting estimates of the magnitude of the passthrough of payroll and income taxes that are found in the literature. To explain why passthrough may be stronger in some instance, they compare taxes based on the perceived link between who pays the tax and who benefits from it. The authors notably argue that a strong linkage between a tax and its associated benefits tends to lead to significantly more passthrough compared to the weak linkage case. They underline that this mechanism is especially relevant when the tax is statutorily incident on employers rather than employees.

The first part of the paper focuses on providing a theoretical foundation to this phenomenon : A.Bozio et al. propose an improvement upon the standard equilibrium model of tax incidence in competitive markets by introducing the notion of perceived wage for workers that incorporates how much the latter perceive that they might benefit from the tax. This implies that employees will react less when the employer shifts a tax's burden on them as they are impacted less severely. Looking at the response of labor supply, both at the extensive and intensive margin, to the introduction of a tax, they show that their model predicts a full passthrough when linkage is strong and close to no pass-through when linkage is inexistent. They also point out that these results are sensitive to the relation between the elasticity of substitution between workers types compared to labor supply elasticity. Most notably, when the former is much greater than the latter, the absence of any perceived tax-benefit linkage does not lead to any pass-through to relative wages and causes a substantial drop in the employment level of the treated group compared to the control groups.

Then, to substantiate their claims empirically, the authors use a Difference in Difference design to study the impact of six major payroll and income reforms that took place in France. While most of these reforms fit well with what the paper is trying to prove, I shall qualify the relevance of one of them in the critique part of this report. For each reform, they compare the evolution of posted earnings and labor costs for the groups impacted by the reform as compared to the one for the control group. For tax statutorily incident on employer they then estimate the pass-through of the tax using the opposite of the ratio between the reform's effects on earnings and the employer payroll tax rate. If posted earnings of the treated go down significantly more than for the control post reform then there is significant pass-through. The results of these estimations are in line with the authors' expectations with a systematic full passthrough of the tax to workers when the linkage is perceived as strong, or when the tax is statutorily incident on workers, compared to close to no pass through when it is deemed weak. To qualify these clear-cut results slightly, I assess the methods used by the authors to establish whether the linkage perception is strong or not and propose additional robustness checks in the later part of this report. Lastly, the authors conduct a meta analysis of existing works estimating the pass-through of other payroll and income tax reforms. They regress those pass through estimates on the degree of tax-benefit linkage, adjusting for time and location FEs. The results of this regression coincides with the core results of the paper as the magnitude of the pass-through estimates relates strongly to the degree of linkage. This correlation

is highly dependent on statutory incidence, as the degree of linkage is only weakly associated to passthrough estimates when statutory incidence rests with employees.

On the whole, this study contributes to four major strands of the public economics literature. Firstly, it adds to the mostly theoretical existing literature (Feldstein and Liebman 2002) on the connection between tax benefit linkage and taxation design by providing robust empirical evidence of this relation. While some prior works already document it for labor supply responses(French et al. 2022), this paper provides an extensive analysis of how it manifests in post-reform posted earnings trends as well. More broadly, it also builds upon a rich literature on statutory incidence and gives credence to the idea of fairness norms described by Saez et al. (Saez, Schoefer, and Seim 2019), which runs counter to the tax incidence invariance theorem of the standard model. Lastly, it relates to prior research on the distributional effects of taxation (Carloni 2021) by giving one more tool for policymakers and researchers to understand the impact of payroll taxes on the labor earnings distribution, based on statutory incidence and tax-benefit linkage.

## Main Remarks and Suggestions

My main critique resides with the choice of an income reform (denoted NL3) that introduces a payroll tax cut for large employers to show that there is no passthrough from employers to employees when there is no linkage. While it is meant to give additional credence to the observation made by the authors for the healthcare-related payroll tax reform (denoted NL2), the fact that it is a tax cut rather than a tax increase poses a genuine identification problem. Indeed, employers may be much more reluctant to passthrough a tax cut rather than a tax increase, regardless of the perceived linkage. Evidence of this asymmetric tendency to pass-through the effect of such a tax reform has been documented by Y.Benzarti et al. in a 2018 (Benzarti and Carloni 2018) paper on the impact of the VAT reform of 2014 in France in the restauration sector. They show that restaurants increase prices substantially in response to an increase in the VAT, while prices are very inelastic to a downward change in the VAT. Although Benzarti et al deal with passthrough from businesses to consumer, a similar pattern may very well be present when looking at passthroughs from employers to employees. In other words, while results of NL3 offer suggestive evidence of the mechanism the authors wish to describe, they are potentially confounded by asymmetry in responses to tax cuts vs tax hikes. One way to check for the existence of such an asymmetry would be to perform a similar analysis for another reform introducing a tax cut for firms but where the linkage is strong. A prime candidate for this exercise would be the de-taxation of overtime hours (such as the "Loi en faveur du travail, de l'emploi et du pouvoir d'achat" of 2007). These reforms introduced a reduction in employer payroll taxes on overtime hours, yet the state compensated the social security fund to ensure that workers' pension rights were preserved (High Linkage). Furthermore, the explicit political goal of these measures was to increase worker earnings ("Travailler plus pour gagner plus"). If the authors find that pass-through was high for this specific "High Linkage" tax cut, it would validate their model. However, if pass-through was partial or if firms captured a significant portion of the tax wedge, it would support the "Asymmetric Rent Capture" hypothesis. This would suggest that the authors' findings are sensitive to the direction of the tax change, weakening the claim that the degree of tax-benefit linkage is the primary driver of effective tax incidence.

My second critique resides with the way the authors identify whether a reform exhibit strong or weak tax-benefit linkage. While it is undeniably robust methodologically, it strikes me as being excessively rigid as it does not allow for heterogeneity in the linkage perception of employees. For instance, for the NL2 reform on the healthcare payroll tax, the authors substantiate that there is no linkage based on statement by political leaders and government officials that would imply that civil society expects the statutory incidence (employers) to also be the effective one. However, in issues such as health I argue that workers that benefit heavily from the French public health system may actually perceive the tax-benefit linkage to be higher than 0. This could allow for passthrough heterogeneity at the individual level which may be worth investigating. For instance, the authors could interact the treatment variable with a proxy for the health situation or expected health needs

of employees, such as age, which is likely to be present in DADS data. If they were to find that pass-through differs systematically between workers who are more likely to value public healthcare (older workers, or workers in sectors with higher health risks) and those who are less likely to do so, this would further strengthen their claim that perceived linkage has a strong influence on actual tax incidence. Conversely, the absence of such heterogeneity could also suggest that perceived linkage is more homogeneous than one might expect in this context.

# Minor Comments

Building upon my earlier suggestion of allowing for more heterogeneity, I believe that controlling for industry-specific shocks (Industry $\times$ Year fixed effects) would be a valuable robustness check. While the authors conscientiously control for year and worker fixed effects, these do not account for time-varying shocks that affect specific sectors differently. For the reform of the flat-rate income tax (impacting profit-sharing bonuses), the authors note potential compositional differences between the treatment group (firms paying bonuses) and the control group. Even if they convincingly show that the treated and control groups do not differ excessively with respect to relevant characteristics, it is plausible that certain industries (e.g., finance, tech) are over-represented in the treated group. If these industries experienced specific growth trajectories or shocks concurrent with the reform, the estimates could be biased. Since standard Worker or Firm fixed effects only control for time-invariant characteristics, they would not capture these differential industry trends. Therefore, including Industry $\times$ Year fixed effects would ensure that the results are not driven by sector-specific business cycles that happen to correlate with the reform timing.

# References


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